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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, STEVEN H D

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/482,054

Applicant(s)

MARGON, KENNETH

Examiner

Steven HD Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/12/2002 has been entered.
2. The amendment, which filed on 2/12/2002 is entered. Claims 1-81 are pending in the application.

Specification

3. The disclosure is objected to because of the following informalities:
 - Page 1, lines 15, the recitation "transmit" should be replaced by "transmits".
 - Page 1, lines 20, the recitation "medium" should be replaced by "media".
 - Page 2, lines 25, the recitation "protocols" should be replaced by "protocols".
 - Page 3, lines 25, the recitation "circumventing and associated" should be replaced by "circumventing associated".
 - Page 5, lines 17, the recitation "embodiments of the invention" should be replaced by "embodiment of the invention".
 - Page 6, lines 8, the recitation "FC 106, data" should be replaced by "FC 106, a data".
 - Page 7, lines 12, the recitation "are" should be replaced by "is".
 - Page 7, lines 28, the recitation "example." should be replaced by "example,".

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Page 9, lines 15, the recitation “listens” should be replaced by “listen” in proper format.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5-7, 19, 24-25, 32-35, 40, 46, 50, 55-57, 61, 66, 68-71, 73-74, 76-77 and 79-80 are rejected under 35 U.S.C. 102(b) as being Kashi by (USP 5682604).

As claims 1, 32, 55, 68-69 and 76, Kashi discloses a base station having a transceiver (Fig 2, Ref 10) for providing a forward channel (Fig 7, Ref 200), a remote station (Fig 2, Ref 11) for monitoring “listening or sensing” the forward channel signal and monitoring reserve channel within a clear “free” channel access interval that assigned to the remote units and in sequential order with at least one other remote (Fig 7, time to sense channel free and col. 1, lines 30-39 and col. 6, lines 7-13) and providing reserve channel signal if it’s clear “free” (Fig 7, Ref 210). See Abstract, col 1, lines 6 to col 4, lines 63 and Fig 1-7.

As claims 2-3, 40 and 61, Kashi discloses a base station (fig 2, ref 10) and a remote station (Fig 2, Ref 11) inherent receive and transmit an encoded signal between them as a data packet (See Fig 4 and col 4, lines 22-37).

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As claims 5-7, 33-35, 56-57, 70-71 and 77, Kashi discloses a priority and unique address of remote station for receiving the forward information from the central station (See col 4, line 22-37).

As claims 19, 46, 73 and 79, Kashi discloses a forward and reserve channel signal is provided during its predetermined interval (See Fig 6).

As claims 24-25, 50, 66, 74 and 80, Kashi discloses a wireless communication system having frequency (Fig 2).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 4, 8-18, 23, 26-31, 36-39, 41-45, 49-54, 58-60, 62-63, 65, 67, 72, 75, 78 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heide (USP 5677909).

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As claims 4 and 41, Kashi does not disclose the data packet including a digitized voice and data. Official Notice is taken that both the concept and the advantages of providing the data packet including digitized voice and data are well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the data packets including the digitized voice and data for transmitting between the base and remote station. The motivation would have been to integrate a wireless network with a wireline network such as Internet and turn the Internet into a reliable telecommunication network.

As claims 8-11, 36-37 and 60, Kashi does not disclose an address is broadcast, a semi broadcast, IP. Official Notice is taken that both the concept and the advantages of providing the address for a device is well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to assign an address to a remote unit.

As claims 12-14, 38-39 and 58-59, Kashi does not disclose a method of assigning a first remote station address from a first set of addresses in a first zone "cell or sector" and a second remote station address from a second set of addresses in a second zone "cell or sector"; wherein set of addresses form an Internet subnetwork. Official Notice is taken that both the concept and the advantages of assigning a different address to each remote to different zone having an Internet subnetwork are well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to assign a different address to each remote to different zone having an Internet subnetwork. The motivation would have been to easily locate the remote station in the zones.

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As claims 15-18, 42-45, 62-63, 72 and 78, Kashi discloses each remote station having a priority parameter for accessing a clear channel interval at the predetermined time in a round robin fashion and an equal predetermined time for a clear channel assessment interval (See Abstract). However, Kashi does not disclose a clear channel interval including a predetermined time slot and each mobile monitor clear channel during its assigned time slot. In the same field of endeavor, Heide discloses a wireless system includes a base station and remote stations including a forward channel "Fig 6, downward period, broadcast period", a reservation channel "upward period" and clear assessment channel "request period".

Since, Kashi discloses a plurality of time slots for remote station responding to global request. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a superframe which includes a downward period, upward period and request period for accessing upward period for transmitting a data packet as disclosed Heidi into Kashi's wireless communication system. Even without, Heidi's teaching, one of ordinary skill in the art would know how to divide a frame into forward, a reserve channel and clear assessment channel interval into a time slot for assigning to the remote station. This method is well known in the art.

As claims 30-31 and 53-54, Kashi does not disclose a method of transmitting a control packet for synchronizing the base station and remote station. Official Notice is taken that both the concept and the advantages of assigning a different address to each remote to different zone having an Internet subnetwork are well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to

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synchronize the base station and remote station. The motivation would have been to adjust a clock of the remote station to coincide with the base station.

As claims 26-29, 51-52, 67, 75 and 81, Kashi does not fully disclose a wireless communication system including a half, full duplex and the signals are transmitted via electrical or optical medium. Official Notice is taken that both the concept and the advantages of forward and reserve channel being half or full duplex is well known and expected in the art.

As claims 23, 49 and 65, Kashi does not disclose a system being used in IPMA environment. Official Notice is taken that both the concept and the advantages of using Internet protocol in a wireless system is well known and expected in the art.

9. Claims 20-22, 47-48 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashi in view of Kay (USP 5299198).

As claims 20-22, 47-48 and 64, Kashi does not disclose a guard time among the forward, reserve and clear assessment channel interval. However, in the same field of endeavor, Kay discloses a guard time for the channels (See Fig 9 and 18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a guard time in the position such as beginning or ending of forward, reserve and clear assessment interval as disclosed by Kay into Kashi's wireless communication. Since, a method of inserting a guard time in the positions such as a beginning or ending interval is well known in the art. So, without Kay's teaching one of ordinary skill in the art would be known how to insert a guard time to prevent interference between the intervals.

Response to Arguments

10. Applicant's arguments filed 2/12/2002 have been fully considered but they are not persuasive.

In response to page 4, the applicant states that Kashi does not disclose a remote station that monitors a reserve channel during a clear channel assessment interval in sequential order with another mobile and provide a reverse channel signal when the reserve channel is clear". In reply, Kashi discloses a remote unit has a monitor unit "Fig 4, Ref 26" for monitoring the reverse channel being free or not during sensing channel assessment interval "Fig 6, Ref Tsfc is a time interval for sensing the reverse channel being free or not", if a reserve channel is free, the remote unit is provided a reverse channel for transmission (See Fig 6, Rx and Tx and col 5, lines 55-67) and the remote units is assigned an priority to access the time to sense channel free in a sequence order (See col 1, line 30-39) and the remote is monitored the time to sense for a free channel at an assigned time (Fig 7 and col. 5, lines 64 to col. 6, lines 13, this is the time which the remote units is assigned to sense a free channel).

In response to page 5 of applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Kashi discloses a communication system wherein the remote unit will access

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a predetermined sensing time to monitor if the uplink channel is free or busy according to its assigned priority for example RTU1, RTU2 has a priority 1, 2 etc. if a channel is free the RTU transmit a message to the central station by tuning the free channel "delay time to transmit". This communication system is non-contention polling protocol "col. 1, lines 1-28" and using TDMA. Heide discloses a communication system, which uses non-contention protocol and Kay disclose a TDMA system wherein a channel has guard band. Therefore, it would have been obvious to one of ordinary skill in the art to apply the teaching of Heidi and Kay into Kashi. The motivation would have been to increase the throughput of the radio channel and reduce interference between the signals.

Therefore, the teaching of Kashi and Heidi perform the claimed invention.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Taketsugu (USP 5740167) discloses a radio communication system wherein a mobile monitors within polling interval for detecting a free channel for transmitting its message.

Scott (USP 6366566) discloses a radio communication system wherein a mobile monitors within polling interval for detecting a free channel for transmitting its message.

Dail (USP 5953344) discloses a communication system having an upstream and downstream channels and upstream clear channel having a plurality of mini slot wherein the remote station will monitor the mini slot for determining its has a free channel for transmitting to the central station.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Steven HD Nguyen
Examiner
Art Unit 2665
April 21, 2002